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UNS Electric, Inc.
88 East Broadway Blvd., P.O. Box 711
HQE910
Tucson, AZ 85702-1720

Melissa Morales
Regulatory Coordinator

(520) 884-3680
mmorales@tep.com

0000168774

March 1, 2016

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, Arizona 85007

Re: Notice of Filing – UNS Electric, Inc.'s Annual Demand-Side Management Progress ("DSM)" Report, Docket No. E-00000U-16-0069

The Electric Energy Efficiency Standards set forth in the Arizona Administrative Code, Section R14-2-2409.A, require UNS Electric, Inc. ("UNS Electric") to submit an annual DSM progress report for each of its Commission-approved DSM programs by March 1st. UNS Electric hereby files its DSM Progress Report for 2015. The Measurement, Evaluation and Research Report listed in Appendix 1 of the DSM Progress Report contains confidential information and is being provided directly to Commission Staff.

If you have any questions, please contact me at (520) 884-3680.

Sincerely,

Melissa Morales
Regulatory Services

Arizona Corporation Commission
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cc: Barbara Keene, Utilities Division, ACC
Compliance Section, ACC

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Definitions

The Arizona Administrative Code ("AAC")

Arizona Department of Housing ("ADOH")

Arizona Public Service ("APS")

Commercial and Industrial ("C&I")

The Arizona Corporation Commission ("Commission")

Consumer Education – program to provide general consumer education about energy-efficiency improvements.

The United States Department of Energy ("DOE")

Demand-Side Management ("DSM")

Energy Efficiency ("EE")

The United States Environmental Protection Agency ("EPA")

Heating, Ventilation and Air Conditioning ("HVAC")

Implementation Contractor ("IC") – A contractor hired to implement a program.

Low Income Home Energy Assistance Program ("LIHEAP")

Measurement, Evaluation, and Research ("MER") – The process of identifying current baseline efficiency levels and the market potential of DSM measures; performing process and program evaluations including the verification of installed energy efficient measures and reported savings; and identifying additional energy efficiency research opportunities.

Navigant Consulting, Inc. ("NCI")

Program Implementation – The implementation of programs including administration, fiscal management of costs for labor, overhead, implementation contractors, or other direct program delivery.

Program Marketing – The marketing of programs and increasing DSM consumer awareness (direct program marketing as opposed to general consumer education).

Planning and Administration – Planning, developing, and administering programs including management of program budgets, oversight of the RFP process, oversight of ICs, program development, program coordination, customer participation, and general overhead expenses.

Program Development, Analysis, and Reporting – Research and development of new DSM program opportunities, analysis of existing and proposed programs and measures, and the tracking and reporting of participation, savings, and benefits. Associated costs are essential to comply with the ACC reporting and rules requirements.

Rebates & Incentives – Payments made to customers or contractors as rebates or incentives.

The Residential Energy Services Network ("RESNET")

Request for Proposal ("RFP") – the process through which proposals are solicited from contractors or vendors.

the **Standard** or – the Electric Energy Efficiency Standards as defined in the State of Arizona Administrative Code Article 24.

Training and Technical Assistance – Energy-efficiency training and technical assistance for utility employees, contractors, or building officials.

Tucson Electric Power Company ("TEP")

UNS Electric, Inc. ("UNSE" or **"Company")**

UNS Gas, Inc. ("UNSG")

DSM PROGRESS REPORT

1. An analysis of the Company's progress toward meeting the annual energy efficiency standard

1.1 Progress Towards the Standard

In accordance with the Commission's Decision No. 71819 (August 10, 2010) and Arizona Administrative Code Section R14-2-2409 (effective January 1, 2011), UNSE submits this annual DSM progress report for the calendar year 2015. This report includes information for all of UNSE's residential, non-residential, and low-income customer programs that were in place during this reporting period.

On June 1, 2015, UNSE filed for a request to for the pending 2015 EE Plan to cover 2015 and 2016. UNSE's 2015-2016 EE Plan was approved in Decision No. 75297 (October 27, 2015) with new measures and programs. Due to timing the newly approved measures and programs will be instituted for program year 2016 and RFPs issued where required for new programs.

For the calendar year 2015, the Commission granted UNSE a waiver for meeting the Standard in AAC Section R14-2-2404(B) due to market conditions and economic challenges. With the continuing economic state in UNSE's service area and reasons outside of UNSE's control UNSE was not able to meet the cumulative Standard for 2015. UNSE's DSM savings, expenditures, societal benefits, incentives, and environmental savings are summarized in Table 1 through Table 5 as noted below.

UNSE will file a 2017 EE Plan by June 1, 2016.

A summary list of tables includes:

Table 1	Cumulative DSM savings as a comparison to the Standard
Table 2	DSM energy savings by program
Table 3	DSM expenses by program
Table 4	Societal benefits and performance incentive for 2015
Table 5	Lifetime environmental savings by program

UNSE's cumulative energy savings as a comparison to the Standard are reported in Table 1 below. In 2015 UNSE's cumulative annual savings as a percent of previous year retail sales was 9.3 percent while the savings target in the Standard for 2015 was 9.5 percent.

TABLE 1 - 2015 CUMULATIVE DSM SAVINGS

UNSE Year	Retail Energy Sales (MWh)	Incremental Annual Energy Savings (MWh)	Cumulative Annual Energy Savings (MWh)	Cumulative Annual Savings as a percent of previous year Retail Sales	Cumulative EE Standard
2010	1,857,160				
2011	1,852,904	15,005	15,005	0.81%	1.25%
2012	1,755,541	35,032	50,037	2.7%	3.%
2013	1,699,307	34,764	84,801	4.83%	5.%
2014	1,677,445	38,829	123,630	7.28%	7.25%
2015		32,317	155,948	9.3%	9.5%

Annual and Lifetime Savings

The DSM portfolio annual and lifetime energy savings are reported in Table 2. Savings are separated into the following categories:

- Capacity Savings (MW)
- Annual MWh Savings
- Annual Therm Savings
- Lifetime MWh Savings
- Lifetime Therm Savings

UNSE is including energy savings toward the Standard for changes in energy efficient building codes per AAC R14-2-2404 (E). Energy savings from this program are reported in Table 2 below.

TABLE 2 - 2015[1] DSM ENERGY SAVINGS (PLANNED & ACTUAL)

Program	Planned Capacity Savings MW	Actual Capacity Savings MW	Planned Annual MWh Savings	Actual Annual MWh Savings	Planned Annual Therm Savings	Actual Annual Therm Savings	Planned Lifetime MWh Savings	Actual Lifetime MWh Savings	Planned Lifetime Therm Savings	Actual Lifetime Therm Savings
Residential Programs										
Appliance Recycling	0.044	0.071	323	526	NA	NA	2,585	4,205	NA	0
Low-Income Weatherization[a]	0.066	0.046	226	158	NA	490[a]	2,760	1,938	NA	8,575[a]
Residential New Construction	0.097	0.076	153	120	NA	719	4,597	3,605	NA	21,559
Shade Tree Program	0.030	0.031	71	73	NA	NA	2,842	2,933	NA	0
Efficient Products	0.875	0.970	9,334	10,342	NA	NA	65,337	72,396	NA	0
Existing Home Program	1.307	2.421	1,918	3,553	NA	5,578	37,049	68,624	NA	110,801
Multi-Family Housing Efficiency	0.019	0.015	238	180	NA	NA	1,943	1,475	NA	0
Non-Residential Programs										
C&I Facilities	0.626	0.513	5,000	4,098	NA	NA	58,242	47,739	NA	0
Bid For Efficiency	0.190	0.205	2,500	2,698	NA	NA	46,329	49,999	NA	0
Retro-Commissioning	0	0	0	0	NA	NA	0	0	NA	0
C&I Demand Response	3.640	3.640	3,616	3,616	NA	NA	0	0	NA	0
Behavioral Programs										
Behavioral Comprehensive	0.236	0.20	2,544	2,154	NA	20,799	18,972	16,059	NA	187,192
Home Energy Reports	0	0	0	0	NA	NA	0	0	NA	0
Support Programs										
Consumer Education & Outreach	0	0	0	0	NA	NA	0	NA	NA	NA
Residential EE Financing	0	0	0	0	NA	NA	0	NA	NA	NA
Energy Codes & Standards Enhancement	1.034	0.897	5,528	4,799	NA	NA	5,528	4,799	NA	0
Portfolio Totals	**8.164**	**9.084**	**31,451**	**32,317**	**0**	**27,096**	**246,185**	**273,772**	**0**	**319,552**

[a]Annual Therm Savings and Lifetime Therm Savings for Low-Income Weatherization are not included in the Portfolio Totals

[1] This table is provided to comply with A.A.C. R-14-2-2409 and Commission Decision No. 74262. Planned savings for annual and lifetime are included in each program description. Capacity savings for C&I Demand Response reflect the capacity available for reduction events. Annual MWh savings for C&I Demand Response reflect the credit available toward the EE Standard per A.A.C. R14-2-2404 (C). UNSE does not conduct planning for therm savings but does show them when appropriate.

1.2 DSM Annual Expenses

The annualized expenses for each program are reported in Table 3. Expenses are separated into the following categories:

- Rebates and Incentives
- Training and Technical Assistance
- Consumer Education
- Program Implementation
- Program Marketing
- Planning and Administration
- Measurement, Evaluation, and Research

TABLE 3 – 2015 DSM PROGRAM EXPENSES

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential Programs								
Appliance Recycling	$24,040	$	0	$33,042	$10,820	$1,026	$1,452	$70,379
Low-Income Weatherization	$96,787	$281	0	0	$1,509	$1,177	$840	$100,593
Residential New Construction	$26,400	$17,190	0	$20,896	0	$1,079	$1,143	$66,708
Shade Tree Program	$13,615	$	$52	$1,880	$2,773	$931	$600	$19,851
Efficient Products	$237,641	$31	$1,909	$199,323	$15,186	$8,570	$11,336	$473,995
Existing Home Program	$709,083	$775	0	$496,264	$6,672	$17,469	$1,255	$1,231,518
Multi-Family Housing Efficiency	$5,674	($2)	0	$10,155	$1,679	$914	$2,049	$20,468
Total for Residential Programs	**$1,113,239**	**$18,275**	**$1,960**	**$761,560**	**$38,638**	**$31,165**	**$18,674**	**$1,983,513**
Non-Residential Programs								
C&I Facilities Efficiency	$349,855	$6,283	$1,256	$172,947	$21,846	$7,824	$9,098	$569,109
Bid For Efficiency (Pilot Program)	$283,256	$328	$292	$45,577	$2,712	$2,979	$2,788	$337,930
Retro-Commissioning	0	$102	$110	$20,318	$1,322	$290	0	$22,141
C&I Demand Response	0	$3,320	0	($735)	0	$1,772	0	$4,357
Total for Commercial Programs	**$633,111**	**$10,032**	**$1,658**	**$238,106**	**$25,881**	**$12,864**	**$11,886**	**$933,538**
Behavioral Programs								
Behavioral Comprehensive	$161,308	$17	$3,475	$75,615	$6,700	$7,074	$1,400	$255,588
Home Energy Reports	0	0	0	0	0	0	$80	$80
Total for Behavioral Programs	**$161,308**	**$17**	**$3,475**	**$75,615**	**$6,700**	**$7,074**	**$1,480**	**$255,668**
Support Programs								
Consumer Education & Outreach	0	$23	$117,493	$9,459	0	$1,872	0	$128,847
Residential EE Financing	0	0	$10	0	0	$	0	$10
Energy Codes & Standards Enhancement	0	0	0	0	0	0	0	0
Total for Support Programs	**0**	**$23**	**$117,503**	**$9,459**	**0**	**$1,872**	**0**	**$128,857**
Portfolio Totals	**$1,907,658**	**$28,347**	**$124,597**	**$1,084,740**	**$71,219**	**$52,975**	**$32,039**	**$3,301,576**
							Program Costs	**$3,301,576**
							Program Development, Analysis & Reporting	**$43,706**
							TOTAL	**$3,345,282**

1.3 Societal Benefits and Performance Incentives

The portfolio societal benefit calculation and performance incentive calculation are reported in Table 4 below. UNSE's portfolio Societal Cost Test ratio for 2015 is 3.1, including all program costs and labor.

UNSE's performance incentive was established in Commission Decision No. 72747 (January 20, 2012). Societal costs, societal benefits, and net benefits are not calculated on an annual basis for Demand Response Programs. Total spending and net benefits for the performance incentive calculation does not include Low-income Weatherization, Education & Outreach, or Demand Response/Direct Load Control Programs. Per Commission Decision No. 74235 (December 31, 2013). UNSE's performance incentive is calculated at 8 percent of DSM net economic benefits, capped at $0.0125 per kWh, whichever is less. UNSE's 2015 performance incentive for calendar year 2015 caps at $0.0125 per kWh and is $403,967.

TABLE 4 – 2015 DSM SOCIETAL BENEFITS & PERFORMANCE INCENTIVE

DSM Program	Program Cost	Planned Societal Benefits	Actual Societal Benefits	Planned Societal Costs	Actual Societal Costs	Planned Net Benefits	Actual Net Benefits
Residential							
Appliance Recycling	$70,379	$108,045	$175,739	$28,489	$46,339	$79,556	$129,400
Low-Income Weatherization[a]	$100,593	$180,616	$126,853	$136,518	$95,881	$44,098	$30,972
Residential New Construction	$66,708	$323,100	$253,330	$115,085	$90,234	$208,015	$163,096
Shade Tree Program	$19,851	$133,391	$137,636	$53,036	$54,723	$80,355	$82,912
Efficient Products	$473,995	$2,331,001	$2,582,842	$619,744	$686,701	$1,711,257	$1,896,141
Existing Home Program	$1,231,518	$3,482,503	$6,450,425	$722,054	$1,337,417	$2,760,449	$5,113,008
Multi-Family Housing Efficiency	$20,468	$107,138	$81,326	$36,493	$27,701	$70,644	$53,624
Total for Residential	$1,983,513	$6,665,794	$9,808,150	$1,711,420	$2,338,996	$4,954,374	$7,469,153
Non-Residential							
C&I Facilities	$569,109	$2,319,924	$1,901,571	$1,311,851	$1,075,284	$1,008,074	$826,287
Bid For Efficiency	$337,930	$1,514,044	$1,633,985	$728,467	$786,176	$785,577	$847,809
Retro-Commissioning	$22,141	0	0	0	$22,141	0	($22,141)
C&I Demand Response	$4,357	0	0	$4,358	$4,357	($4,358)	($4,357)
Total for Non-Residential	$933,538	$3,833,969	$3,535,556	$2,044,676	$1,887,958	$1,789,293	$1,647,598
Behavioral Programs							
Behavioral Comprehensive	$255,588	$998,289	$844,998	$225,544	$190,911	$772,745	$654,087
Home Energy Reports	$80	0	0	0	$80	0	($80)
Total for Behavioral Programs	$255,668	$998,289	$844,998	$225,544	$190,991	$772,745	$654,007
Support Programs							
Consumer Education & Outreach	$128,847	0	0	0	$128,847	NA	($128,847)
Residential EE Financing	$10	0	0	0	$10	NA	($10)
Energy Codes & Standards Enhancement	0	0	0	0	0	0	0
Total for Support Programs	$128,857	0	0	0	$128,857	0	($128,857)
Program Totals	**$3,301,576**	**$11,498,052**	**$14,188,704**	**$3,981,640**	**$4,546,803**	**$7,516,412**	**$9,641,901**
Program Development, Analysis & Reporting	$43,706	0	0	0	$43,706	0	($43,706)
Portfolio Total	**$3,345,282**	**$11,498,052**	**$14,188,704**	**$3,981,640**	**$4,590,509**	**$7,516,412**	**$9,598,195**
Performance Incentive Calculation:							
Total kWh Savings	$32,317,395						
Total Net Benefits	$9,598,195						
8% Net Benefits	$767,856						
Total kWh savings * $0.0125	$403,967						
Performance Incentive for 2014	**$403,967**						

[a]Annual Therm Savings and Lifetime Therm Savings for Low-Income Weatherization are not included in the Portfolio Totals

1.4 Lifetime Environmental Savings

The annualized environmental savings for each program are reported in Table 5. Savings are separated into the following categories:

- sulphur oxides,
- nitrogen oxides,
- carbon dioxide, and
- water consumption.

TABLE 5 – 2015 DSM LIFETIME ENVIRONMENTAL SAVINGS

Program	Lifetime SOX Reduction (lbs)	Lifetime NOX Reduction (lbs)	Lifetime CO2 Reduction (lbs)	Lifetime Water Reduction (gallons)
Residential Programs				
Appliance Recycling	23	500	5,004,404	1,089,194
Low-Income Weatherization[a]	11	231	2,537,904	502,030
Residential New Construction	20	429	4,544,004	933,620
Shade Tree Program	16	349	3,489,946	759,577
Efficient Products	398	8,615	86,151,285	18,750,574
Existing Home Program	377	8,166	82,970,186	17,773,653
Multi-Family Housing Efficiency	8	175	1,754,853	381,938
Non-Residential Programs				
C&I Facilities	263	5,681	56,809,507	12,364,422
Bid For Efficiency	275	5,950	59,499,268	12,949,841
Retro-Commissioning	0	0	0	0
C&I Demand Response	20	430	4,302,744	936,480
Behavioral Programs				
Behavioral Comprehensive	88	1,911	21,318,877	4,159,239
Home Energy Reports	0	0	0	0
Support Programs				
Consumer Education & Outreach	0	0	0	0
Residential EE Financing	0	0	0	0
Energy Codes & Standards Enhancement	26	571	5,710,598	1,242,895
Portfolio Totals	**1,526**	**33,009**	**331,555,673**	**71,843,461**

[a]Annual Therm Savings and Lifetime Therm Savings for Low-Income Weatherization are not included in the Portfolio Totals

2. **A list of current Commission-approved DSM programs and DSM measures, organized by customer segment**

The Company currently has 14 Commission approved DSM programs as listed below.

Commission Approved DSM Programs	
Residential Programs	
4.1.	Efficient Products
4.2.	Appliance Recycling Program
4.3.	Residential New Construction
4.4.	Existing Homes and Audit Direct Install Program
4.5.	Shade Tree Program
4.6.	Low-Income Weatherization Program
4.7.	Multi-Family Housing Efficiency Program
Non-Residential Programs	
4.8.	C&I Facilities/Schools Program
4.9.	Bid for Efficiency Program
4.10.	Retro-Commissioning Program
4.11.	C&I Demand Response Program
Behavioral Programs	
4.12.	Behavioral Comprehensive Program
Support Programs	
4.13.	Education and Outreach
4.14.	Energy Codes & Standards Enhancement Program

Commission approved DSM programs and measures, including Commission Staff's benefit/cost calculation per measure, and the actual benefit/cost calculation per measure based upon 2014 results, are attached in **Appendix 1.**

3. **A description of the findings from completed research projects completed during the previous year**

UNSE's DSM and Customer Solutions staff reviews various EE technologies on an ongoing basis during:

- program administration,
- solicitation for bids for services,
- when conducting research on measures for inclusion in future DSM implementation plans,
- and when attending conferences and exchanging best practices with peer utilities.

Research projects completed in 2015 and associated findings include:

Residential Smart Thermostats: With the Commission's approval of the smart thermostat measure in TEP's 2016 EE plan (Decision No. 75450, February 11, 2016) UNSE can leverage TEP's three years of research into UNSE's next EE plan for a similar measure. This will allow UNSE, if the same measure is approved, to have an RFP process that incorporates a proven and mature smart thermostat technology. With the growth in popularity of the Internet of Things ("IoT"), connected home smart thermostats, and other connected appliances residences can be programmed to achieve energy savings without compromising comfort or functionality. Other advantages of connected smart thermostats include two-way behavioral EE communication, demand response capability, and customer facing energy analytics.

HomeEnergyCalculator ("HEC"): Research from the smart thermostat measure carried into TEP's and UNSE's HEC - online tools that are free for customers to use. Based on user inputs about their home construction, appliances, and habits HEC provides estimated energy usage, seasonal factors affecting energy usage, cost saving recommendations, and tutorials to help customers understand their energy usage and bills. https://www.uesaz.com/efficiency/tools/ezhome/

4. Information on the DSM programs

Residential Programs

4.1 Efficient Products Program

a. Description

The UNSE Efficient Products Program promotes the purchase of energy efficient retail products through in-store buy-down promotions or other delivery methods. The Program promotes the installation of energy efficient lighting by residential customers in the UNSE service territory.

b. Program Goals, Objectives, and Savings Targets

The objectives of this Program are to:

- Reduce peak demand and overall energy consumption in homes and small businesses;
- Increase the purchase of Compact Florescent Lights ("CFLs");
- Promote market transformation through retail partnerships; and
- Increase stocking and selection of energy efficient retail products.

Sales, demand, and energy savings goals for 2015:

CFL Sales	256,962
Peak Demand Savings (MW)	0.58
Energy Savings (MWh)	10,865

c. Levels of Participation

A total of 257,955 new CFLs and were sold in 2015. An "in storage adder" has also been included in the 2015 total to account for applicable bulbs taken out of storage and installed since program inception in 2010. Additional detail is provided in Program Modifications section below.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates & Incentives[a]	Training & Technical Assistance	Consumer Education	Program Implementation[a]	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Efficient Products	$237,641	$31	$1,909	$199,323	$15,186	$8,570	$11,336	$473,995

[a] *Includes $63,276 for health and safety related repairs and $29,494 for Weatherization Agencies administrative expenses.*

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3**.

"Many CFL bulbs are sold in multipacks with 3 to 10 bulbs per pack. Some of these bulbs are installed immediately while some are placed into storage and the associated claimed savings realized in subsequent program years. Savings for bulbs placed in storage are accounted for in subsequent years via the In-Storage Rate (ISR). From 2010 to 2014 the ISR was 10 percent. A union of a 2014 field lighting logger study and a general population survey found that the actual ISR is 18 percent. The 18 percent ISR is used for the program starting in 2015.

Prior to the 2014 program year the savings from the installation of in-storage bulbs were not claimed. In order to claim these delayed savings NCI employed the methodology presented in the Department of Energy's Uniform Methods Protocols ("UMP"). The UMP's methodology was developed in 2012 and is updated regularly.

- For 2015, 2016, and 2017, summary in-storage values are added up from the old and new methodologies.
- Claimed savings used for the calculations are at the meter and are submitted to the Commission each year. Savings totals are also after the ISR reduction."[2]

f. kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
CFL Lighting	257,955	969.71	10,342,291
Pool Pump Motors	NA	NA	NA
Totals	**257,955**	**969.71**	**10,342,291**

CFL Lighting kW Savings includes 136 kW and kWh savings includes 1,707,421 kWh for the 2015 In Storage Adder. Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

[2] Appendix 3 – Navigant Consulting, Inc. Measurement, Evaluation, and Research Report

i. Performance-incentive calculations for the previous year
Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions
No problems were encountered during this reporting period.

k. Program Modifications
New measures approved by the Commission in October 2015 will be implemented in 2016. The new measures include Energy Star central air conditioners/heat pumps, clothes washers, dishwashers, refrigerators, room air conditioners/heat pumps, and residential LED lighting.

l. Programs or Measures Terminated
No measures were terminated during this reporting period. UNSE does not plan to terminate this Program in 2016.

4.2 Appliance Recycling Program

a. Description
The Appliance Recycling Program is designed to remove and recycle inefficient refrigerators and freezers. As national studies indicate that approximately 20 percent of customers have at least one secondary inefficient refrigerator or freezer in their home there is a significant potential for energy savings for this Program. This Program permanently removes inefficient appliances that may otherwise remain in service either at the customer's home or be donated or re-sold. In addition to providing the customer with an incentive the Program removes the usual barriers of taking these appliances offline by eliminating the cost and/or inconvenience associated with disposing of the appliance.

b. Program Goals, Objectives, and Savings Targets
The objectives of the Program are to:

- Remove old and inefficient refrigerators and freezers from customer's homes;
- Permanently remove the inefficient refrigerators and freezers from the grid, and
- Recycle the refrigerators and freezers in an environmentally responsible way.

The 2015 goal was to remove and recycle 220 refrigerators or freezers.

c. Levels of Participation
A total of 357 units, 301 Refrigerators and 56 freezers, were recycled during this reporting period.

d. Costs Incurred
Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Appliance Recycling	$24,040	$	0	$33,042	$10,820	$1,026	$1,452	$70,379

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3**.

f. kW, kWh, and Therm Savings

Units Recycled	kW savings	kWh savings	Therm savings
373	70.82	525,673	0

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

With the approval of an Appliance Recycling Program for TEP, UNSE was able to leverage the economics of scale in 2015 and exceeded its participation goal due to increased advertising venues available within the territory. The Program was promoted in local newspapers, on radio, in one bill stuffer, Google AdWords, digital banners, internet radio Pandora, and the UNSE website.

Due to the unforeseen ceasing of operations by the implementation contractor, JACO Environmental, Inc. on November 20th, 2015, the Appliance Recycling Program was temporarily suspended. UNSE personnel fulfilled the remaining pickups and incentives that were scheduled for the remainder of the year. An increased incentive was issued by UNSE to its customers who were affected by this situation to cover the insufficient funds and NSF fees incurred from the invalid checks that JACO Environmental, Inc. issued for program participation. UNSE will send out an RFP in 2016 for a new implementation contractor to resume the Program.

k. Program Modifications

No program modifications were made during this reporting period.

l. Programs or Measures Terminated

No measures were terminated during this reporting period. UNSE does not plan to terminate this Program or any program measures in 2016 and will send out an RFP for a new implementation contractor.

4.3 Residential New Construction Program

a. Description

The Residential New Construction Program for UNSE is marketed as the Energy Smart Homes ("ESH") Program. The ESH Program emphasizes the whole-house approach to improving health, safety, comfort, durability, and energy efficiency. The Program promotes homes that

meet the Environmental Protection Agency ("EPA")/Department Of Energy ("DOE") Energy Star® Home performance requirements. To encourage participation, the Program provides incentives to homebuilders for each qualifying home. On-site inspections and field testing of a random sample of homes is required to ensure that homes meet the Energy Star® Home performance requirements; these will be conducted by third-party Residential Energy Services Network ("RESNET") certified energy raters selected by each builder. Components of the ESH Program include development of branding, builder training curriculum, and marketing material.

b. Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Reduce peak demand and overall energy consumption in new homes;
- Stimulate construction of new homes that are inspected and tested to assure energy performance;
- Stimulate energy efficiency standards that are higher than EPA/DOE, Energy Star® performance standards;
- Stimulate the installation of high-efficiency heating and cooling systems, envelope, lighting, and fixed appliances (Energy Star® products);
- Cultivate customer demand for, and a contractor base to deliver, comprehensive energy efficiency installations in alignment with the "Home Performance with Energy Star Program." http://www.energystar.gov/index.cfm?fuseaction=hpwes_profiles.showsplash
- Work with local builders to construct energy-efficient homes;
- Train builder construction staff and subcontractors in advanced building science concepts to increase energy efficiency through improved design and installation practices;
- Transform the market by improving construction practices in the UNSE service territory;
- Assist sales agents with promoting and selling energy-efficient homes; and
- Train builder construction staff and sub-contractors in advanced building-science concepts to reach energy efficiency goals through improved design and installation practices; and
- Increase homebuyer awareness and understanding of energy-efficient building practices and the benefits of purchasing an energy-efficient home.

The goal for 2015 was 75 homes at ≤73 HERS

c. Actual Levels of Participation

57 homes were completed in 2015 @≤ 73 HERS.

d. Costs Incurred

Costs incurred during the reporting period are listed below.

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Residential New Construction	$26,400	$17,190	0	$20,896	0	$1,079	$1,143	$66,708

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3**.

f. kW, kWh, and Therm Savings

No. of Homes	kW savings	kWh savings	Therm savings
54	76.15	120,157	719

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

Due to economic barriers participating builders and raters indicated a slight downturn in new homes built in the UNSE service territory over 2014.

k. Program Modifications

In April 2015, implementation of the UNSE Residential New Construction was brought in-house and UNSE's contract with the implementation contractor, CSG, was terminated.

l. Programs or Measures Terminated

No measures were terminated during this reporting period. UNSE does not plan to terminate the ESH Program or any Program measures in 2016.

4.4 Existing Homes and Audit Direct Install Program

a. Description

The UNSE Existing Homes and Audit Direct Install Program is designed to encourage homeowners to increase the energy efficiency of their homes. The Program provides incentives for high-efficiency HVAC equipment and for home performance services such as sealing leaky duct work, installing insulation, and other thermal envelope improvements in existing homes. The Program provides direct incentives to participating contractors with the requirement that the incentives are passed on to utility customers as a line item credit toward approved Program measures.

The Existing Home and Audit Direct Install Program was extended per Commission approval in Decision No. 75297 and is marketed as the "Efficient Home Program."

b. Program Goals, Objectives and Savings Targets

The objectives of the Existing Homes Audit component of the Program are as follows:

- To properly size and provide quality installation of high efficiency HVAC equipment, seal leaky ductwork, and install thermal envelope measures;
- To increase the number of BPI certified contractors by advancing their building science skills.
- Cultivate customer demand for and a contractor base to deliver comprehensive energy efficiency retrofits in alignment with the Home Performance with Energy Star model.

The 2015 Program goals were:

Measure	Goal
Air Sealing	30
Duct Test & Repair	253
HVAC	1,266
Total	2,519

c. Levels of Participation

Measure	YTD Actual
Air Sealing	28
Duct Test & Repair	468
HVAC	624
Total	1,127

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Existing Home Program	$709,083	$775	0	$496,264	$6,672	$17,469	$1,255	$1,231,518

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3**.

f. kW, kWh, and Therm Savings

Measure	kW savings	kWh savings	Therm savings
Air Sealing	17.02	25,295	0
Shade Screens	2.47	3,240	0
Duct Test & Repair	1,407.45	2,018,949	5,195
HVAC	993.97	1,505,108	384
Total:	2,420.92	3,552,593	5,578

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms). Shade Screens were 2014 Program Year active projects completed in 2015 program year.

g. Environmental Benefits realized
Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit
Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year
Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions
No problems were encountered during this reporting period.

k. Program Modifications
In January 2015 UNSE awarded the implementation contract for the Efficient Home Program to Proctor Engineering Group (PEG). PEG's implementation solution added real-time HVAC equipment diagnostic testing and support for participating contractors. The PEG solution also transformed the customer incentive experience to an instant, paperless process that includes HVAC commissioning and duct sealing certificates mailed to each participating customer. PEG began implementation of the program in March 2015.

Air Sealing-Attic Insulation and ER HVAC with QI were eliminated in late 2015 per ACC Decision No. 75297 but ER HVAC with QI and different Tiers was instituted in the same Decision along with multiple tiers for DTR, ER HVAC with QI, and HVAC QI.,

l. Programs or Measures Terminated
Air sealing and shade screens were eliminated in 2015 per ACC Decision No. 74599 (July 30, 2014).

4.5 Shade Tree Program

a. Description
The UNSE Shade Tree Program is marketed under the name of "Trees for You" ("TFY") and is primarily targeted to residential customers. Community organizations, commercial customers, and schools can participate if they meet the Program requirements. UNSE customers are allowed to purchase two desert adapted, five-gallon trees per year (four trees are allotted for homes built before 1980) which must be planted on the south, west, or east side of the home. Though customers purchase the tree(s) from the nursery of their choice they must

complete an application provided by UNSE, provide a copy of their paid invoice, and submit all information to UNSE to receive a $15.00 (per tree) credit on their electric bill.

b. Program Goals, Objectives, and Savings Targets

The objective of the Program is to promote energy conservation and the environmental benefits associated with planting low water usage trees. Along with the energy savings trees provide to the homes, trees also provide habitat for wildlife, absorb air and water pollutants, control storm water runoff and soil erosion, and provide an aesthetic beauty to neighborhoods and the community.

Program goals for 2015:

No. Trees Distributed	1,100
Energy Savings (MWh)	71

c. Levels of Participation

UNSE achieved its participation goal in 2015. UNSE partnered with local Home Depots and other retailers to cross-promote the Program through their outreach events. Program information is included in materials distributed through the Direct Canvassing Program, a subprogram of the Behavioral Comprehensive Program.

Customer Applications Processed	921
No. Trees Distributed in 2015	1,135

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Shade Tree Program	$13,615	$	$52	$1,880	$2,773	$931	$600	$19,851

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in Appendix 3.

f. kW, kWh, and Therm Savings

No. of Trees	kW savings	kWh savings	Therm savings
1,135	30.56	73,318	0

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year
Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions
No problems were encountered during this reporting period.

k. Program Modifications
No program modifications were made during this reporting period.

l. Programs or Measures Terminated
No measures were terminated during this reporting period. UNSE does not plan to terminate this Program in 2016.

4.6 Low-Income Weatherization Program ("LIW")

a. Description
The UNSE LIW Program is designed to improve the energy efficiency of homes for customers whose income falls within the defined federal poverty guidelines. The steps taken in the LIW Program will reduce electric bills for eligible customers and improve their comfort and quality of life. Energy savings realized from the LIW Program will allow low-income customers to better utilize their limited income for other items such as rent, food, or medical expenses.

b. Program Goals, Objectives, and Savings Targets
The objectives of the Program are to:

- Increase the number of homes weatherized each year;
- Reduce participating low income customer's average household utility bills by utilizing energy conservation measures as defined in the Weatherization Assistance Program Rules; and
- Improve the quality of life for customers by providing them with a safer and healthier home.

The 2015 goal was to weatherize 65 homes.

c. Levels of Participation
A total of 33 households received weatherization assistance during this reporting period.

d. Costs Incurred
Costs incurred during this reporting period are listed below:

0	Rebates & Incentives[a]	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Low Income Weatherization	$96,787	$281	0	0	$1,509	$1,177	$840	$100,593

[a] *Includes $6,078.89 for health and safety related repairs and $8,437.15 for Weatherization Agencies' administrative expenses.*

e. Evaluation and Monitoring Activities and Results

The Arizona Department of Housing ("ADOH"), with billing data from UNSE and other Arizona gas and electric utilities, is analyzing and tracking the energy use in weatherized homes statewide. As their database grows, a more accurate analysis of the impact of weatherization activities will emerge. UNSE will report energy savings from weatherization activities based upon the most recent ADOH report. The ADOH does not report any kW demand savings. The report is attached in Appendix 2.

The January 2016 ADOH report for 2015 is summarized below:

- The report includes jobs completed across Arizona on homes utilizing TEP, UNSG, UNSE, and Southwest Gas Corporation utility data. This analysis is ongoing, and new data will be updated to these values on a quarterly basis.
- Savings to Investment Ratios ("SIR") are provided for total investment from all funding spent (diagnostics, energy measures, health and safety measures) and for energy related measures only (diagnostics and energy measures).
- Present value is based on 17.5 years measure life, discount rate of 3 percent and a utility cost escalation rate of 3 percent.
- The combined SIR of all jobs reviewed to date for funds (LIHEAP, DOE, utility funding) spent on diagnostics, energy measures and health and safety measures was 0.99.
- The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics was 1.26.
- The average savings per home reviewed was 2,229 kWh and 35 therms of natural gas (gas therms average includes all electric homes).

f. kW, kWh, and Therm Savings

No. of Homes	kW savings	kWh savings	Therm savings
32	46.45	158,476	490

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms). Therms are not included in the portfolio total savings.

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

UNSE, along with other major utilities in Arizona, continues to experience low participation from some low income agencies. Several meetings held in 2015 with all of the state's Weatherization agencies, Arizona Community Action Association ("ACAA") and the ADOH have included discussions on this issue. Some agencies are having difficulty adjusting to the loss of ARRA funding, requiring them to operate on reduced budgets and less staff. The ADOH continues to advise the agencies on best practices to maximize funds.

k. Program Modifications

Through a new partnership with the Community Food Bank UNSE was able to distribute 3,200 complementary CFL directly to Low Income customers. In addition, UNSE included bulbs and weatherization information with the complimentary bulbs. The bulbs were expensed through the LIW Program, thus allowing UNSE to record additional savings for the bulbs within the LIW Program.

l. Programs or Measures Terminated

No measures were terminated during this reporting period. UNSE does not plan to terminate this Program or any Program measures in 2016.

4.7 Multi-Family Housing Efficiency Program

a. Description

The UNSE Multi-family Housing Efficiency Program is designed to promote energy efficiency in the residential multi-family sector. The program targets multi-family properties with 5 dwelling units or more to install efficient lighting (CFLs or LEDs) and low-flow water devices. Additionally, multi-family facility managers are encouraged to partake in the C&I Facilities program, which promotes measure installation for the common areas.

b. Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Reduce peak demand and overall energy consumption in the multi-family housing market;
- Promote EE retrofits of both dwelling units and common areas; and
- Increase overall awareness about the importance and benefits of EE improvements to the landlord and property ownership community;

The 2015 goal was to provide direct-install measures consisting of CFLs, low-flow kitchen and bathroom faucet aerators, and low-flow water-sensing showerheads to 250 Multi-family Housing complex units.

c. Levels of Participation

Through year end 2015, measures were installed in 289 apartment homes located in eight major apartment complexes. The participating units in 2015 consisted of lower-income subsidized housing or senior living complexes.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Multi-Family Housing Efficiency	$5,674	($2)	0	$10,155	$1,679	$914	$2,049	$20,468

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3**.

f. kW, kWh, and Therm Savings

No. of Multi-Family Facilities	Measures	kW savings	kWh savings
6	3,282.	15	180,330

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

k. Program Modifications

No program modifications were made during this reporting period.

l. Programs or Measures Terminated

No measures were terminated during this reporting period. UNSE does not plan to terminate this Program or any Program measures in 2016.

Non-Residential Programs

4.8 Commercial &Industrial ("C&I") Facilities/Schools Program

a. Description

The UNSE C&I Facilities/Schools Program is designed to minimize barriers to implementing energy-efficiency improvements in the commercial market. These barriers typically consist of a lack of capital, information search costs, transaction costs, performance uncertainty, and the so-called "hassle factor." The purpose of the program is to assist commercial firms and K-12 educational facilities with analyzing their energy use and improving their building/system energy efficiencies.

The Program provides incentives directly to contractors for the installation of selected high-efficiency lighting; HVAC systems; motors; and refrigeration measures. The incentives are set at a higher level for this market in order to encourage contractors to market and deliver the program, thereby offsetting the need for UNSE marketing and overhead expenses. The Program also employs an internet-based measure analysis and customer project processing system which makes the process easier for both contractors and customers. The Program provides contractors and customers with the opportunity to propose innovative energy-efficiency solutions through custom energy-efficient measures.

b. Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Encourage commercial customers to install high-efficiency lighting equipment and controls, HVAC equipment, and energy-efficient refrigeration systems in their facilities;
- Encourage contractors to promote the Program and provide turn-key installation services to small business customers;
- Overcome the unique market barriers of the small business market including:
  - First costs and lack of access to capital for energy efficiency improvements;
  - Lack of awareness and knowledge about the benefits and cost of energy efficiency improvements;
  - Hassle and transactions costs; and
  - Performance uncertainty associated with energy efficiency projects;
- Assure that the participation process is clear, easy to understand and simple; and
- Increase the awareness and knowledge of business owners, building owners and managers, and other decision-makers on the benefits of high-efficiency equipment and systems.

The savings goals for 2015:

Energy Savings (MWh)	5,000

c. Levels of Participation

During this reporting period 111 non-residential customers participated in the program.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
C&I Facilities	$349,855	$6,283	$1,256	$172,947	$21,846	$7,824	$9,098	$569,109

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3.**

f. kW, kWh, and Therm Savings

Measure	No. Installed	kW savings	kWh savings
Custom	414.	349	2,878,164
HVAC	4,242.2	62	151,258
Lighting	4,762.	101	1,058,218
Plug Load	2.	0	3,564
Refrigeration	38.	1	7,144

Totals	**9,458.2**	**513**	**4,098,348**

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized
Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit
Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year
Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions
No problems were encountered during this reporting period.

k. Program Modifications
No program modifications were made during this reporting period.

l. Programs or Measures Terminated
Program high efficiency air conditioning measures for 14, 15, and 16 SEER package and split AC and HP were discontinued in 2015 per ACC Decision No. 75297. A new single measure combining high efficiency air conditioning units into a single measure was approved in the same Decision. UNSE does not plan to terminate this Program or any additional Program measures in 2016.

4.9 Bid for Efficiency Program

a. Description
UNSE's Bid for Efficiency Pilot Program is designed so customers or project sponsors can propose their own energy efficiency projects and then bid competitively for incentives within Program guidelines. UNSE will select winning applicants based upon specified criteria.

Program participants and project sponsors may include commercial or industrial customers, Energy Service Companies, or other aggregators who submit proposals for multiple sites.

b. Program Goals, Objectives, and Savings Targets
The Program objectives are to encourage customers and project sponsors to develop energy efficiency projects designed to optimize energy use by encouraging a systems approach to energy efficiency. Program goals include:

- Ensure projects are submitted, approved, implemented, and verified in a timely manner;
- Allow projects to be customer-driven; the customer or project sponsor will select appropriate trade and professional allies to design and implement projects;
- Encourage implementation of multiple measures; and
- Encourage applications that aggregate measures at multiple sites.

The savings goal for 2015:

Energy Savings (MWh)	2,500

c. Levels of Participation

During this reporting period 14 customers participated in the program.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Bid For Efficiency	$283,256	$328	$292	$45,577	$2,712	$2,979	$2,788	$337,930

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in Appendix 3.

f. kW, kWh, and Therm Savings

No. of Projects	Measures Installed	kW savings	kWh savings
14	1,217.	205	2,698,046

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

k. Program Modifications

No program modifications were made during this reporting period.

l. Programs or Measures Terminated

No measures were terminated during this reporting period. UNSE does not plan to terminate this Program in 2016.

4.10 Retro-Commissioning Program ("RCx")

a. Description

UNSE's RCx Program is designed to identify deficiencies in existing facilities and make necessary adjustments to produce energy savings, restore equipment to its original efficiency, and improve occupant comfort. The Program assists owners of larger existing commercial and industrial facilities in identifying methods and processes to improve energy performance.

Targeted improvements are relatively inexpensive to implement and may offer simple paybacks in less than two years.

b. Program Goals, Objectives, and Savings Targets

The objectives of the Program are to:

- Target large facilities that have lighting, cooling, and ventilation as their primary end uses of energy;
- Improve building performance, reduce maintenance, and lower energy bills for participants;
- Facilitate development of an RCx contractor pool; and
- Develop relationships with commercial and industrial customers leading to other areas of participation in UNSE's portfolio of DSM programs.

c. Levels of Participation

There was no participation in 2015.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Retro-Commissioning	0	$102	$110	$20,318	$1,322	$290	0	$22,141

e. Evaluation and Monitoring Activities and Results

Because there was no participation in the program NCI did not perform an evaluation of this Program for 2015.

f. kW, kWh, and Therm Savings

There were no claimed energy savings during this reporting period.

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

There were no Program participants in 2015. UNSE has been working with RCx contractors from the Phoenix and Tucson areas to encourage delivery of RCx services in UNSE's northern and southern Arizona service territories. UNSE is also leveraging contractor interest in the recently approved TEP RCx program to increase interest in the UNSE program.

k. Program Modifications

No program modifications were made during this reporting period.

l. Programs or Measures Terminated

No measures were terminated during this reporting period. UNSE does not plan to terminate this Program in 2016.

Non-Residential Programs

4.11 Commercial & Industrial ("C&I") Demand Response Program

a. Description

The UNSE C&I Demand Response Program is designed to manage peak demand and mitigate system emergencies through a commercial and industrial load curtailment program. The Program is delivered in-house by engaging with commercial and industrial customers, and encouraging those customers to participate in a proactive demand response program. For those customers who choose to participate, UNSE will install equipment that provides UNSE control of either selected loads or the entire electric load in a facility.

UNSE installs metering equipment for all participants to enable proper tracking of interval load data to ensure customer participation in any control event and also to provide data for post event analysis. In addition, participants must agree to be placed on UNSE's Interruptible Power Service tariff in lieu of any cash incentive for participation.

b. Program Goals, Objectives, and Savings Targets

The primary goal of the Program is to provide up to 10 MW of summer peak demand reduction, available for up to 80 hours per year, in order to mitigate system emergencies.

c. Levels of Participation

A total of 48 participants were under contract in 2015 with an estimated reduction potential of 3.64 MW.

d. Costs Incurred

Due to a previously undiscovered accounting discrepancy on switching equipment purchased in 2014 UNSE over-reported 2014 implementation costs by $89,769 for this program. The 2015 program costs listed below reflect a correction in implementation costs by this same amount:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
C&I Demand Response	0	$3,320	0	($735)	0	$1,772	0	$4,357

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3**.

f. kW, kWh, and Therm Savings

The Energy Efficiency Standard allows a credit for demand response and load management programs per A.A.C. R14-2-2404 (C). Peak reduction capability may be converted to an annual energy savings equivalent based on an assumed 50 percent load factor. The credit shall not exceed 10 percent of the annual standard. The following table shows the allowable credit for this Program based on the available capacity reduction and the 10 percent cap. See the Program Modifications section below for more information.

No. of Participants	Number of Events	Maximum MW Credit	MWh Savings Credit
48	0	3.64	3,616

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

UNSE underestimated the availability of automated switching equipment to enable interruption of load for larger 3-phase customers. In addition, the cost of customer ordered automated switching equipment was greater than anticipated. After further research UNSE has determined that a combination of some custom ordered equipment and already available UNSE warehouse equipment provides the most cost-effective method to deliver this program.

Many municipal water pumping customers have existing switching equipment and back-up generation. For these customers UNSE has devised a delivery mechanism that uses Company owned communications equipment to control the customer's switching equipment. This further lowers cost and increases the cost-effectiveness of the program.

k. Program Modifications

No program modifications were made during this reporting period.

l. Programs or Measures Terminated

UNSE does not plan to terminate this Program in 2016.

Behavioral Programs

4.12 Behavioral Comprehensive Program

a. Description

The Behavioral Comprehensive Program consists of four subprograms. The focus of the Program is to educate residential customer on how changes in behavior, including purchasing decisions, can improve energy efficiency. The subprograms include low-cost measures such as replacing older technology with energy efficient CFLs, faucet aerators, LED nightlights, setting refrigerator thermometers, and educational opportunities.

The four subprograms consist of:

- Direct Canvassing
  - The Direct Canvassing initiative is a grass-root, door to door, approach to promote energy efficiency and is designed to reach neighborhoods difficult to reach through traditional messaging. Each customer receives four CFLs along with program materials for appropriate UNSE DSM programs.
- K-12 Education
  - In addition to energy based class room curriculum students are instructed in energy saving approaches for their homes. Students in grades 4-8 are given a take home kit which includes CFLs, LED nightlights, and educational material on how to reduce energy use.
- Community Education
  - The Community Education program engages community groups and works with public entities to conduct hands-on energy efficiency workshops. Attendees receive an energy efficiency kit with a sample of materials including weather-stripping, low flow showerheads, weather caulk, and CFLs.
- CFL Community Outreach
  - The CFL Community Outreach provides complimentary CFLs through the participation of community events and through collaborations with community organizations. The program complements the presence of UNSE at community events and its overall education and outreach efforts and energy efficiency messaging..

b. Program Goals, Objectives, and Savings Targets

The Program objectives are to influence energy related behaviors including the following:

- Habitual behaviors
  - Adjust thermostat setting
  - Turn off unnecessary lights
- Small purchasing and maintenance behaviors
  - Purchase and install low flow faucet aerators and low flow shower heads
  - Purchase and install compact fluorescent light bulbs
  - Perform regular HVAC maintenance
- Larger purchasing decisions
  - Purchase an ENERGY STAR® appliance
  - Purchase higher energy efficient heating and cooling equipment

The savings goal for 2015 was 2,544 MWh (2,544,000 kWh).

c. Levels of Participation

- Direct Canvassing distributed 3,877 kits. Each kit consists of four CFLs.
- The K-12 Education Program conducted 92 classroom presentations and distributed 2,588 Energy Saving Kits.
- In 2015 nine Home Energizer Workshops were conducted and 228 Energy Saving Kits were distributed.

- 51,360 CFLs were distributed to UNSE customers in all three service areas. Methods of delivery included Home Shows, County Fairs, service organizations, food banks, low-income agencies, and builder associations.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below.

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Behavioral Comprehensive	$161,308	$17	$3,475	$75,615	$6,700	$7,074	$1,400	$255,588

e. Evaluation and Monitoring Activities and Results

NCI performed quarterly reconciliations for this program to verify coincident demand and energy savings. The MER report is attached in **Appendix 3**.

f. kW, kWh, and Therm Savings

Measure	kW savings	kWh savings	Therms savings
Community/K-12 Educational Kits	38	491,854	20,799
CFL Promotion	124	1,276,347	0
Direct Canvassing	37	385,389	0
Totals	**200**	**2,153,590**	**20,799**

Savings are adjusted for line losses of 10.69 percent for both demand and energy (excluding therms).

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

No additional problems were encountered during this reporting period.

k. Program Modifications

No program modifications were made during this reporting period.

l. Programs or Measures Terminated

No measures were terminated during this reporting period. UNSE does not plan to terminate this Program or any Program measures in 2016.

Support Programs

4.13 Consumer Education and Outreach Program

a. Description

The Consumer Education and Outreach Program is responsible for the marketing of the UNSE portfolio as a whole, as well as general consumer education. The focuses of activities are as follows:

- Develop brochures and communications materials that showcase all available EE programs;
- Develop and maintain communication material related to general energy savings information;
- Provide labor and materials to staff trade shows and community events;
- Develop and maintain web content to educate consumers on energy use and TOU rate choices; and
- Cross communication of EE Programs and general energy savings information.

UNSE representatives spoke at many civic and other organizational meetings promoting DSM Programs and energy education. These organizations and civic bodies include:

- Kingman Home and Garden Expo, Kingman
- Lake Havasu City Homebuilders Show, Lake Havasu
- Kingman Regional Medical Center, Kingman;
- Mohave County Fair, Kingman
- Rotary Club, Kingman
- Boys & Girls Club, Kingman
- Lee Williams High School, Kingman
- Colorado River Builder's Association, Lake Havasu City
- Kingman Cancer Care Unit, Kingman
- Mohave County Community Services Department, Kingman
- Northwest Arizona Builder's Association, Kingman
- North Country HealthCare, Inc., Kingman
- Kingman High School, Kingman
- Kingman Middle School, Kingman
- Kingman Master Gardeners, Kingman
- Lake Havasu Master Gardeners, Lake Havasu
- Kingman Academy of Learning High School, Kingman
- Chicanos Por La Causa, Inc, Nogales
- Kingman Aid to Abused People, Kingman
- Kingman Motor Cross, Kingman
- London Bridge Yacht Club, Lake Havasu City
- Emmanuel Christian Academy, Kingman
- Venture Club of Kingman, Kingman
- Lake Havasu Chamber of Commerce, Lake Havasu
- Western Arizona Council of Governments, Mohave County

UNSE continues to educate its employees about the Company's DSM programs and emphasizes the importance of UNSE employees helping to ensure the success of the programs.

b. Program Goals, Objectives, and Savings Targets

The Program is designed to educate commercial and residential customers on ways to save energy through conservation measures, energy efficiency measures, or utilizing Time-of-Use ("TOU") rates.

c. Levels of Participation

During this reporting period 348 customers were enrolled in the PowerShift™ TOU Program.

d. Costs Incurred

Costs incurred for this Program during the reporting period are listed below:

DSM Program	Rebates & Incentives	Training & Technical Assistance	Consumer Education	Program Implementation	Program Marketing	Planning & Admin	Measurement, Evaluation & Research	Program Total Cost
Consumer Education & Outreach	0	$23	$117,493	$9,459	0	$1,872	0	$128,847

e. Evaluation and Monitoring Activities and Results

There were no claimed savings during this reporting period to evaluate and there is no third-party evaluation for this program.

f. kW, kWh, and Therm Savings

There are no claimed energy savings to report for this program.

g. Environmental Benefits realized

Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit

Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year

Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions

No problems were encountered during this reporting period.

k. Program Modifications

No program modifications were made during this reporting period.

l. Programs or Measures Terminated

UNSE does not plan to terminate this Program in 2016.

4.14 Energy Codes & Standards Enhancement Program

a. Description

The Energy Codes and Standards Enhancement Program is an existing program approved by the Commission in Decision No. 75297. The Program maximizes energy savings through

promoting adherence to local building energy codes, the adoption of current nationally or internationally recognized building codes, and through enhanced energy efficient appliance standards. The program uses a variety of methods to i) improve levels of compliance with existing building energy codes and appliance standards; and ii) support adoption of newer energy codes and appliance standards as warranted by market conditions. Specific program activities target needs of local building officials.

- Educating local code officials and building professionals on current standards and development;
- Providing documentation of the specific local benefits of code enforcement and the promotion of newer energy code adoptions over time;
- Ensuring utility incentive programs align with local energy codes and appliance standards; and
- Collaborating with relevant stakeholders to build a more robust community while advancing the adoption and implementation of strong, effective building energy codes and appliance standards across the local jurisdictions within UNSE's service territory.

b. Program Goals, Objectives, and Savings Targets

The program is designed to increase energy savings in the residential and commercial sectors by improving levels of building code compliance, supporting periodic energy code updates/adoptions as warranted by market conditions, and advocating for higher efficiency electric appliances.

c. Levels of Participation

In 2015, UNSE Program staff met with building officials from Kingman, Lake Havasu City, Mohave County, and Santa Cruz County to discuss educational opportunities and to encourage them to consider adopting building energy codes where such building codes have not been adopted or to update any remaining older building codes within their jurisdiction. UNSE staff also met with a variety of building partners educating and discussing the benefits of energy conservation codes and the process to adopt newer codes in UNSE's service territories.

d. Costs Incurred

There were no reported costs during this reporting period.

e. Evaluation and Monitoring Activities and Results

UNSE staff attend, support and participate in meetings that encourage the understanding, adoption and enforcement of building codes, receive feedback from participants on staff interaction with the meeting attendees, and then review and evaluate the feedback.

f. kW, kWh, and Therm Savings

An anlysis performed by UNSE identified energy savings through improved appliance standards. The following table shows the incremental energy savings credit allowed by Commission Decision No. 72747 for 2015.[3]

[3] Decision No. 72747, p. 56, lines 17-19 states "...allow the Company to also count toward meeting the Energy Efficiency Standard in A.A.C. R14-2-2404, for 2012 – 2020, up to one third of the energy savings resulting from energy efficiency appliance standards..."

Measure	MW savings	MWh savings	Therm savings
Energy Codes & Standards Enhancement	0.90	4,799	NA

g. Environmental Benefits realized
Realized environmental benefits are reflected in Table 5 above.

h. Incremental benefits and net benefit
Incremental benefits and net benefits are reflected in Table 4 above.

i. Performance-incentive calculations for the previous year
Performance-incentive calculations are reflected in Table 4 above.

j. Problems Encountered and Proposed Solutions
Arizona is one of nine states in the country that allow "home rule" adoption of residential building codes. Counties and municipalities may adopt some or all of the residential building codes available (some minimum code standards are enforced for nonresidential structures such as municipal buildings, schools, and health care facilities). Historically, the jurisdictions within UNSE service territory have not adopted energy conservation building codes. UNSE has been proactively educating code officials and contractors on the advantages of energy conservation codes, and will continue its efforts to overcome some of the barriers and misconceptions of Code adoption.

k. Program Modifications
No program modifications were made during this reporting period.

l. Programs or Measures Terminated
UNSE does not plan to terminate this Program 2016.

Appendix 1 – Commission Approved DSM Programs & Measures for 2015

Commission Approved DSM Programs & Measures for 2015

DSM Program	Commission Approved 2015 Program Budget	Actual 2015 Program Expenditures	Actual 2015 Program Societal Benefits	Actual 2015 Program Societal Costs or Staff Analysis Benefit/Cost Ratio (Decision No. 75297)	Actual 2015 Benefit/Cost Ratio
Residential Programs					
Efficient Products	$888,532	$473,995	$2,582,842	$686,701	3.76
Measures	Energy Star Central Air Conditioner			2.17	N/A[c]
	Energy Star Clothes Washer			1.95	N/A[c]
	Energy Star Dishwasher			1.56	N/A[c]
	Energy Star Refrigerator			1.16	N/A[c]
	Energy Star Room Air Conditioner			1.02	N/A[c]
	Integral CFL			2.23	3.51
	Integral CFL In-Storage Adder/Carry Over			2.23	10.93
	LED Home Lighting			1.25	N/A[c]
	Pool Pump Timers[b]			1.95	N/A[b]
	Variable Speed Pool Pump[b]			1.0	N/A[c]
Appliance Recycling	$89,765	$70,379	$175,739	$46,339	3.79
Measures	Freezer Recycling			1.66	3.79
	Refrigerator Recycling			1.66	3.79
Residential New Construction	$282,618	$66,708	$253,330	$90,234	2.81
Measures	Energy Star ≤ 73 HERS Electric			1.70	2.86
	Energy Star ≤ 73 HERS Gas			1.70	2.68
Existing Home Program	$2,119,484	$1,231,518	$6,450,425	$1,337,417	4.82
Measures	Air Sealing[e] (discontinued)			0.86	2.82[e]
	Air Sealing & Attic Insulation[e] (discontinued)			0.95	2.26[e]
	Duct Sealing (Performance)			1.13	5.78
	DTR Tier 1[e] (discontinued)			1.18	5.78[e]
	DTR Tier 2[e] (discontinued)			1.13	5.78[e]
	ER HVAC with QI			1.20	3.39
	ER HVAC QI Tier 1 DTR			1.24	N/A[c]
	ER HVAC QI Tier 2 DTR			1.88	N/A[c]
	HVAC QI			1.01	4.83
	HVAC QI Tier 1 DTR			0.98	N/A[c]
	HVAC QI Tier 2 DTR			1.77	N/A[c]
	Tune Up-Advanced Tune Up			1.27	N/A[c]
	Tune Up-WCC			1.83	N/A[c]
	Shade Screens[e] (discontinued)			0.57 (forecasted)	1.55
Shade Tree Program	$35,343	$19,851	$137,636	$54,723	2.52
Measures	Shade Tree			1.05	2.52

Low-Income Weatherization	$351,817	$100,593	$126,853	$95,881	1.32
Measures	Whole House Low Income Weatherization			1.02	1.19
	Incandescent to CFL			N/A	2.81
Multi-Family Housing	$266,930	$20,468	$81,326	$27,701	2.94
Measures	Integral CFL			1.80	2.90
	0.5 GPM Bathroom Faucet Aerator			2.04	3.07
	1.5 GPM Kitchen Faucet Aerators			2.42	3.33
	1.5 GPM Low Flow Showerheads			1.86	2.83
	DTR Tier 1[e] (discontinued)			2.01	N/A[e]
	DTR Tier 2[e] (discontinued)			2.01	N/A[e]
	Tune Up-Advanced Tune Up			1.31	N/A[c]
	Tune Up-WCC			1.99	N/A[c]
Non-Residential					
C&I Facilities/Schools	$911,204	$569,109	$1,901,571	$1,075,284	1.77
	Advanced Power Strips - Load Sensor			1.22	N/A[b]
	Advanced Power Strips - Timer Plug Strip			2.78	N/A[b]
	Anti sweat heater controls			1.96	1.23
	Canopy LED			1.32	N/A[c]
	Cold cathode CFL			2.31	N/A[a]
	Computer Power Monitoring System			1.72	N/A[b]
	Custom Measures – HVAC			1.91	3.13
	Custom Measures – Lighting			1.91	1.44
	Daylighting controls			1.00	N/A[b]
	Delamping – Indoor			6.91	4.96
	Delamping – Outdoor			6.91	5.52
	Energy efficient exit signs			1.26	3.01
	Evaporator Fan Controls			1.35	N/A[b]
	Exterior HID to LED			1.49	N/A[c]
	Exterior HIDs to T8/T5			2.63	N/A[b]
	Hard Wire CFL			1.15	N/A[b]
	High Efficiency Evaporator Fan Motors (ECM)			1.69	1.89
	High Efficiency Evaporator Fan Motors (PSC)			•2.06	N/A[b]
	High Efficiency SEER Packaged and Split AC's			1.14	1.21
	High Efficiency SEER Packaged and Split HP's			1.88	3.54
	HVAC EMS Delivery			1.02	N/A[c]
	HVAC System Test and Repair			1.60	N/A[c]
	Induction Lighting			1.02	N/A[b]
	Integral Screw In CFL			1.38	2.42
	Interior HIDs to T8/T5			3.45	1.33
	Interior High-Bay LED			0.97	N/A[c]

	LED Indoor Lighting			1.19	N/A[c]
	LED Outdoor Lighting			0.97	N/A[c]
	Occupancy sensors			1.33	2.40
	Outdoor CFL			3.58	4.87
	Premium T8 Lighting			1.49	2.37
	Programmable Thermostats			1.64	6.27
	Reduced LPD			1.34	N/A[a]
	Refrigerated Case LED			1.52	N/A[c]
	Refrigerated Display Automatic Door Closers			2.76	N/A[a]
	Shade Screens			1.00	1.61
	Standard T8 Lighting			1.04	5.81
	Strip Curtains			2.65	N/A[a]
	T-8 or T-12 to LED Tubes			1.01	N/A[c]
	Variable Speed Drives			2.70	N/A[a]
	Vending Miser - Beverage Case Controls			2.19	2.99
	Vending Miser - Reach-in Cooler Controls			2.41	N/A[b]
	Vending Miser - Snack Machine Controls			1.41	N/A[b]
	Window Films			1.43	N/A[b]
Bid for Efficiency	$292,005	$337,930	$1,633,985	$786,176	2.08
Measures	Bid for Efficiency Project			1.79	2.08
Retro-Commissioning[b]	$205,815	$22,141	N/A	$22,141	N/A[b]
Measures	Retro-Commissioning Project			1.37	N/A[b]
C&I Demand Response[a]	$374,850	$4,357	N/A	$4,357	N/A[a]
Measures	Demand Response / Direct Load Control			2.66	N/A[a]
Behavioral Programs					
Behavioral Comprehensive	$261,538	$255,588	$844,998	$190,911	4.43
Measures	K-12 Education Kit			3.65	9.05
	Community Education Kit			1.86	9.15
	Direct Canvasing			1.78	3.05
	CFL Outreach Promotion			1.70	4.18
Home Energy Reports[c]	$250,000	$80	N/A	N/A	N/A[c]
Measures	Home Energy Reports			N/A	
Support Programs					
Consumer Education & Outreach[a]	$106,050	$128,847	N/A	$128,847	N/A[a]
Measures	General Consumer Education				
Energy Codes & Standards Enhancement[a]	$34,020	$0	N/A	N/A	N/A[a]
Measures	Credit for increased energy codes and appliance standards				
Residential EE Financing[d]	$0	$10	N/A	$10	N/A[d]
Measures	N/A				N/A

Program Totals					
Program Totals	$6,469,971	$3,301,576	$14,188,704	$128,847	3.1
Program Development, Analysis & Reporting		$43,706	N/A	$10	N/A

[a]These programs do not provide direct energy savings, but promote participation in other energy efficiency programs. They do not require a stand-alone benefit/cost analysis.

[b]This program did not have participation in this during this reporting period.

[c]This program or measure was granted per Decision No. 75297 on October 10, 2015 and did not have participation during this reporting period.

[d]This program was previously discontinued and had no participation during this reporting period.

[e]This program was discontinued during this reporting period.

Appendix 2 - Arizona Department of Housing 2015 Report

ARIZONA DEPARTMENT OF HOUSING
TRAINING, MONITORING AND EVALUATION REPORT
FISCAL YEAR 2016 ANNUAL REPORT
UniSource Electric
January 2016

Training and Monitoring for Weatherization

Training for the Weatherization Assistance Program (WAP) is done through a variety of methods; the two biggest ones are one on one field training when an issue is noted in the field and class room/lab training. The one on one field training is done by the state monitors when they are out in the field looking at work in progress and monitoring jobs that are completed. When a monitor sees something that is not to WAP standards it is noted and brought to the agencies attention. If training is required it is done right then, in the field where it is best, as it is hands-on training.

The class room/lab training is provided by the Southwest Building Science Training Center (Training Center), operated by the Foundation for Senior Living Home Improvement (FSL). The state's weatherization program has a long history working with the training center in developing training curriculum and training weatherization workers. The main stay of WAP training from the training center is WAP boot camp and Success with Weatherization (Critical Details), which is required by all WAP field workers. The Boot Camp is a five day training that covers the basics of building science, pressure diagnostics, health and safety and residential energy auditing.

The Success with Weatherization training was developed through a two year grant for quality control in weatherization by the Training Center and Advance Energy. The course focuses on critical details of the work being performed and teaches the steps necessary to complete the work, correctly every time. The training material and detail sheets that are taught in the class are available online to the students once they completed the course. This is the first year that Success with Weatherization has been incorporated into the program. That state mandated that at least one field personnel and one member of management must attend the course from each agency.

The training center also offer course in Lead RRP, OSHA 10 and OSHA 30 Certifications, WAP administration and many more, which some are required by the weatherization program but other facilities can provide the training, as the two mentioned above though can only be taken at the Training Center, for a complete list of training course they offer can be found at: http://www.swbstc.org/trainings/

The Training Center, in partnership with the Building Performance Institute, Inc. (BPI), provides nationally recognized building science certifications to Arizona's weatherization agencies. All agencies have BPI Certified staff members or contractors that are BPI certified.

Details on BPI
http://www.bpi.org/

Peer-to-Peer Fiscal and Technical Procedures

The Arizona WAP has a peer-to-peer working group that allows the fiscal and technical staff from the agencies and the ADOH to meet and discuss issues that arise in the program. Agencies are able to share solutions to common problems and other information. These peer-to-peer meetings occur every few months and have been a great arena to discuss any changes or improvement to the program.

Agency Personnel Performance Reviews

A review and monitoring process to evaluate the competency of agency personnel performing the various requirements of the weatherization program was developed for the statewide weatherization assistance program. Based on this process, additional one-on-one training and technical assistance is provided on an as-needed basis.

Monitoring

The Arizona WAP has implemented a monitoring program that focuses on determining areas that need improvement and utilizes the monitoring process to implement needed changes. The areas covered include: auditing, diagnostics, testing and measures completed and program operations. This process begins with the review of 100%of the technical reports for auditing, diagnostics, testing and work completed each month. These reports can highlight instances where opportunities were missed or program requirements were not followed. When there are concerns with some element of the report, a site visit is conducted to address the concerns. At the job site, the diagnostic, testing and work are reviewed to determine if any improvements can be made. A minimum of 5% of the job sites will be visited, with each agency being monitored at least once during the twelve month period. Based on the site visit results, follow-up training and technical assistance is provided to the local agency. For agencies where the technical reports do not show concerns, the site visit consists of monitoring a number of randomly selected homes and reviewing the diagnostics, testing and work completed. These efforts, combined with the training and competence programs, have a goal of ensuring that the program is providing the clients with a high return on Utility's investments, while maintaining or improving the customers' health and safety.

Utility Bill Analysis

This report includes jobs completed across Arizona using data provided by TEP, Unisource Gas and Electric and Southwest Gas utility data. This analysis is ongoing, new data will be updated to these values on a quarterly basis.

Provided are Savings to Investment Ratios (SIR) for total investment from all funding spent (diagnostics, energy measures and health and safety measures) and for energy related measure only (diagnostics and energy measures).

Assumptions

Present value is based on 17.5 years measure life, discount rate of 3% and utility cost escalation rate of 3%.

Results Summary

The combined SIR of all jobs reviewed to date for funds (LIHEAP, DOE, utility funding) spent on diagnostics, energy measures and health and safety measures is .99 SIR. The combined SIR of all jobs reviewed to date for funds spent on energy measures and diagnostics is 1.26. Please note that sub-grantees often run parallel programs using other funds such as CDBG to cover those items that cause deferrals.

The average energy savings per home reviewed was 2229 kWh of electricity and 35 therms of natural gas (gas therms average includes all electric homes).

ADOH will continue to track utility histories of completed jobs, the tracking of post-weatherization energy savings will give positive feedback to weatherization staff, highlighting measures or processes that provide high returns. Local operational changes can be based on this information to improve cost-effectiveness.

Appendix 3 – Navigant Consulting, Inc. Measurement, Evaluation, and Research Report

The Navigant Consulting, Inc. report is provided directly to Commission Staff.